

DUAL-USE SUPPORT RACK ASSEMBLY

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to a support rack assembly, and more particularly to a dual-use support rack assembly both available for a barbecue stove and a warming stove.

2. Description of the Related Art

A warming stove has a greater height so that it includes a support rack having a smaller height, and a barbecue stove has a smaller height so that it includes a support rack having a greater height. However, the conventional support rack is not both available for a barbecue stove and a warming stove, thereby greatly limiting the versatility of the conventional support rack.

SUMMARY OF THE INVENTION

The primary objective of the present invention is to provide a dual-use support rack assembly both available for a barbecue stove and a warming stove.

Another objective of the present invention is to provide a support rack assembly that can be assembled easily and conveniently.

A further objective of the present invention is to provide a support rack assembly that can be operated easily and conveniently, thereby facilitating the user operating the support rack assembly.

1 In accordance with the present invention, there is provided a support
2 rack assembly, comprising a base, and a support seat adjustably mounted on
3 the base, wherein:

4 the base has a top face having a center formed with a cylindrical
5 barrel extended upward, the barrel of the base has a periphery formed with a
6 plurality of upright guide tracks each extended along a longitudinal direction
7 of the barrel of the base, each of the guide tracks of the barrel has an uppermost
8 portion formed with an arcuate limit slot extended downward in an oblique
9 manner;

10 the support seat has a periphery formed with a plurality of screw
11 bores each aligning with a respective one of the guide tracks of the barrel, and
12 the support rack assembly further comprises a plurality of adjusting screws
13 each extended through a respective one of the guide tracks of the barrel and
14 each screwed into a respective one of the screw bores of the support seat, so
15 that the support seat is locked on the barrel of the base.

16 Further benefits and advantages of the present invention will become
17 apparent after a careful reading of the detailed description with appropriate
18 reference to the accompanying drawings.

19 **BRIEF DESCRIPTION OF THE DRAWINGS**

20 Fig. 1 is an exploded perspective view of a support rack assembly in
21 accordance with the preferred embodiment of the present invention;

Fig. 2 is a perspective assembly view of the support rack assembly in accordance with the preferred embodiment of the present invention;

Fig. 3 is a plan view of the support rack assembly as shown in Fig. 2;

Fig. 4 is a plan cross-sectional view of the support rack assembly as shown in Fig. 2;

Fig. 5 is a schematic operational view of the support rack assembly as shown in Fig. 3 in adjustment;

Fig. 6 is a schematic operational view of the support rack assembly as shown in Fig. 4 in adjustment;

Fig. 7 is a perspective assembly view showing the support rack assembly being used for a barbecue stove; and

Fig. 8 is a perspective assembly view showing the support rack assembly being used for a warming stove.

DETAILED DESCRIPTION OF THE INVENTION

Referring to the drawings and initially to Figs. 1-4, a dual-use support rack assembly in accordance with the preferred embodiment of the present invention comprises a base 10, and a support seat 20 adjustably mounted on the base 10.

The base 10 has a top face having a center formed with a cylindrical barrel 15 extended upward. The barrel 15 of the base 10 has a periphery formed with a plurality of upright guide tracks 17 each extended along a longitudinal direction of the barrel 15 of the base 10. Each of the guide tracks

1 17 of the barrel 15 has an uppermost portion formed with an arcuate limit slot
2 18 extended downward in an oblique manner. The periphery of the barrel 15 of
3 the base 10 is formed with an opening 16 extended to a top of the barrel 15 of
4 the base 10.

5 The support seat 20 is movable relative to the base 10 so as to adjust
6 the distance between the support seat 20 and the base 10, thereby adjusting the
7 height of the support rack assembly. The support seat 20 has a periphery
8 formed with a plurality of screw bores 22 each aligning with a respective one
9 of the guide tracks 17 of the barrel 15, and the support rack assembly further
10 comprises a plurality of adjusting screws 30 each extended through a
11 respective one of the guide tracks 17 of the barrel 15 and each screwed into a
12 respective one of the screw bores 22 of the support seat 20, so that the support
13 seat 20 is locked on the barrel 15 of the base 10. The periphery of the support
14 seat 20 is formed with an opening 21 aligning with the opening 16 of the barrel
15 15 of the base 10. Preferably, each of the screw bores 22 of the support seat 20
16 is located at a lower portion of the support seat 20.

17 As shown in Fig. 4, each of the adjusting screws 30 includes a slide
18 31 slidably mounted in a respective one of the guide tracks 17 of the barrel 15,
19 and a threaded rod 32 extended from a distal end of the slide 31 and screwed
20 into a respective one of the screw bores 22 of the support seat 20. The support
21 rack assembly further comprises a plurality of locking nuts 35 each screwed on
22 the threaded rod 32 of a respective one of the adjusting screws 30 and each

1 rested on an inner wall of the support seat 20. Thus, the support seat 20 is
2 movable relative to the base 10 by moving the adjusting screws 30 so as to
3 adjust the distance between the support seat 20 and the base 10, thereby
4 adjusting the height of the support rack assembly.

5 In operation, referring to Figs. 1-8, the support seat 20 is moved
6 downward relative to the base 10 by moving the adjusting screws 30
7 downward, so that each of the adjusting screws 30 is moved to the lowermost
8 portion of a respective one of the guide tracks 17 of the barrel 15 as shown in
9 Fig. 3, so as to reduce the height of the support rack assembly, so that the
10 support seat 20 of the support rack assembly is used to support a warming
11 stove 60 having a greater height as shown in Fig. 8.

12 Alternatively, the support seat 20 is moved upward relative to the
13 base 10 by moving the adjusting screws 30 upward, so that each of the
14 adjusting screws 30 is moved to the uppermost portion of a respective one of
15 the guide tracks 17 of the barrel 15 and is moved into and locked in the
16 respective limit slot 18 as shown in Figs. 2 and 5, so as to increase the height of
17 the support rack assembly, so that the support seat 20 of the support rack
18 assembly is used to support a barbecue stove 50 having a smaller height as
19 shown in Fig. 7.

20 Although the invention has been explained in relation to its preferred
21 embodiment(s) as mentioned above, it is to be understood that many other
22 possible modifications and variations can be made without departing from the

1 scope of the present invention. It is, therefore, contemplated that the appended
2 claim or claims will cover such modifications and variations that fall within the
3 true scope of the invention.